veneco
ventilation systems

Installation manual
ETP Comfort mini 50 S/L

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www.veneco-ventilation.be

Veneco ventilation by Elek Trends Productions nv
Blauwfazantjesstraat 4 | B - 7700 Moeskroen
Tel. +32 (0)56 48 15 90 | Fax +32 (0)56 48 15 91
www.veneco-ventilation.be | info.veneco-ventilation.be

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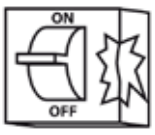
1. SAFETY REQUIREMENTS

- Read the user's manual carefully prior to operation and installation of the single-room reversible energy regeneration ventilator, hereinafter the ventilator.
- Installation and operation of the ventilator shall be performed in accordance with the present user's manual as well as the provisions of all the applicable local and national construction, electrical and technical codes and standards.
- The warnings contained in the present user's manual must be considered most seriously since they contain vital personal safety information !
- Failure to follow the safety regulations may result in an injury or ventilator damage.
- Read the manual carefully and keep it as long as you use the ventilator.
- While transferring the ventilator control the user's manual must be turned over to the receiving operator.

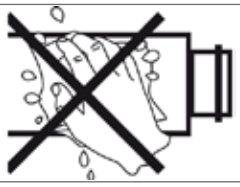
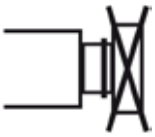
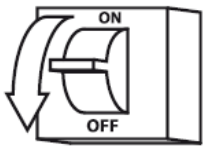
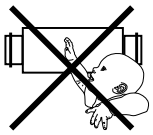
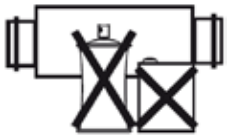
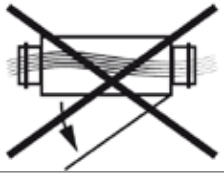
Symbol legend used in the manual:

	WARNING !
	DO NOT !

VENTILATOR MOUNTING SAFETY PRECAUTIONS

	The ventilator must be disconnected from the power supply prior to every installation or repair operation.		The ventilator must not be operated outside the temperature range stated in the user's manual or in aggressive or explosive environments.
	Do not position any heating devices or other equipment in close proximity to the ventilator power cord.		Do not use damaged electric equipment and conductors to connect the ventilator to power mains
	While installing the ventilator follow the safety regulations specific to the use of electric tools		Unpack the ventilator with care.
	Do not change the power cord length at your own discretion. Do not bend the power cord. Avoid damaging the power cord.		Use the ventilator only as intended by the manufacturer.

VENTILATOR OPERATING SAFETY PRECAUTIONS

	Do not touch the controller or the remote control with wet hands! Do not carry out the ventilator maintenance with wet hands.		Do not wash the ventilator with water. Protect the ventilator electric parts from water ingress.
	Do not block the air duct when the ventilator is on.		Disconnect the ventilator from power supply before maintenance.
	Do not let children operate the ventilator.		Do not damage the power cable while operating the ventilator. Do not put any objects on the power cable.
	Keep explosive and inflammable products away of the ventilator.		Do not open the operating ventilator.
	In case of unusual sounds, smoke disconnect the ventilator from power supply and contact the service centre.		Do not let air flow from the ventilator be directed to the open flame devices or candles.

2. INTRODUCTION

This user's manual includes technical description, operation and mounting guidelines, technical data sheet for the energy single-room reversable ventilator ETP Comfort mini 50, hereinafter the ventilator.

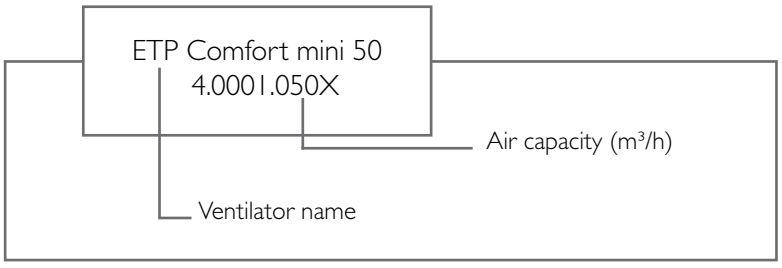
3. USE

The ventilator is designed to arrange permanent controllable air exchange in flats, cottages, hotels, cafes and other domestic and public premises.
The ventilator is equipped with a ceramic regenerator that enables supply of fresh air due to extract air heat energy regeneration.
The ventilator is designed for through-the-wall mounting. The telescopic ventilator design enables its installation in the walls from 250mm up to 470mm thick for the ventilator ETP Comfort mini 50S and from 120mm up to 300mm thick for the ventilator ETP Comfort mini 50L.
The ventilator is rated for continuous operation always connected to power mains.
Transported air must not contain any flammable or explosive mixtures, evaporation of chemicals, coarse dust, soot and oil particles, sticky substances, fibrous material, pathogens or any other harmful substances.

4. DELIVERY SET

- ETP Comfort mini 50 ventilator - 1 piece
- Fastening set - 1 piece
- User's manual - 1 piece
- Remote controller - 1 piece

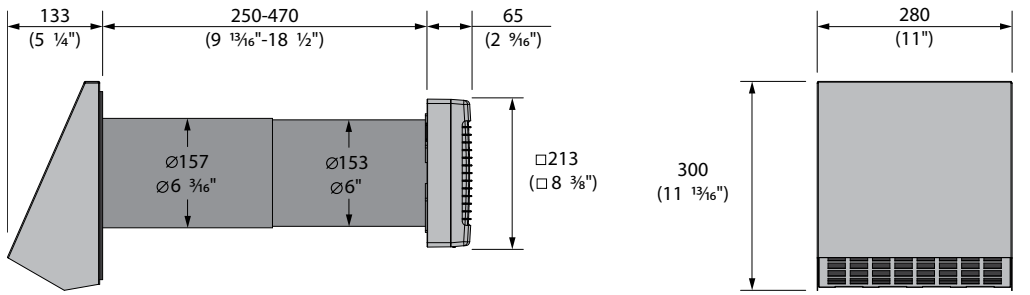
5. DESIGNATION KEY



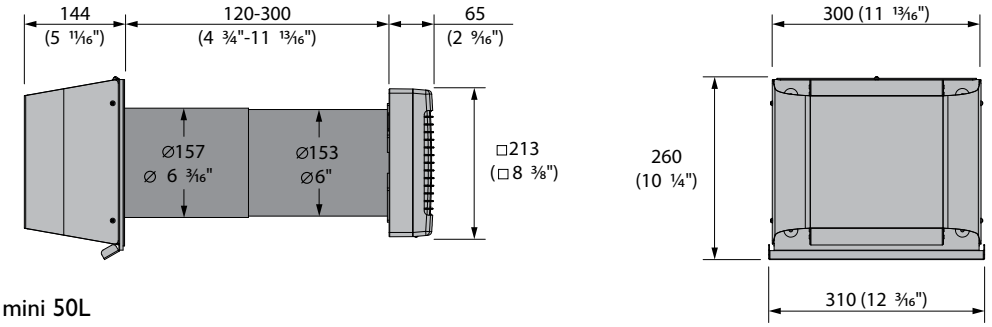
6. TECHNICAL DATA

The ventilator is designed for indoor application with the ambient temperature ranging from -20°C up to +50 °C and relative humidity up to 80%.
The ventilator is classified as a class I electric appliance.
Ingress Protection (IP) rating from solid objects and liquids IP 24
The ventilator design is regularly improved, so some models may slightly differ from those ones described in this manual.

VENTILATOR OVERALL DIMENSIONS, MM



ETP Comfort mini 50S



ETP Comfort mini 50L

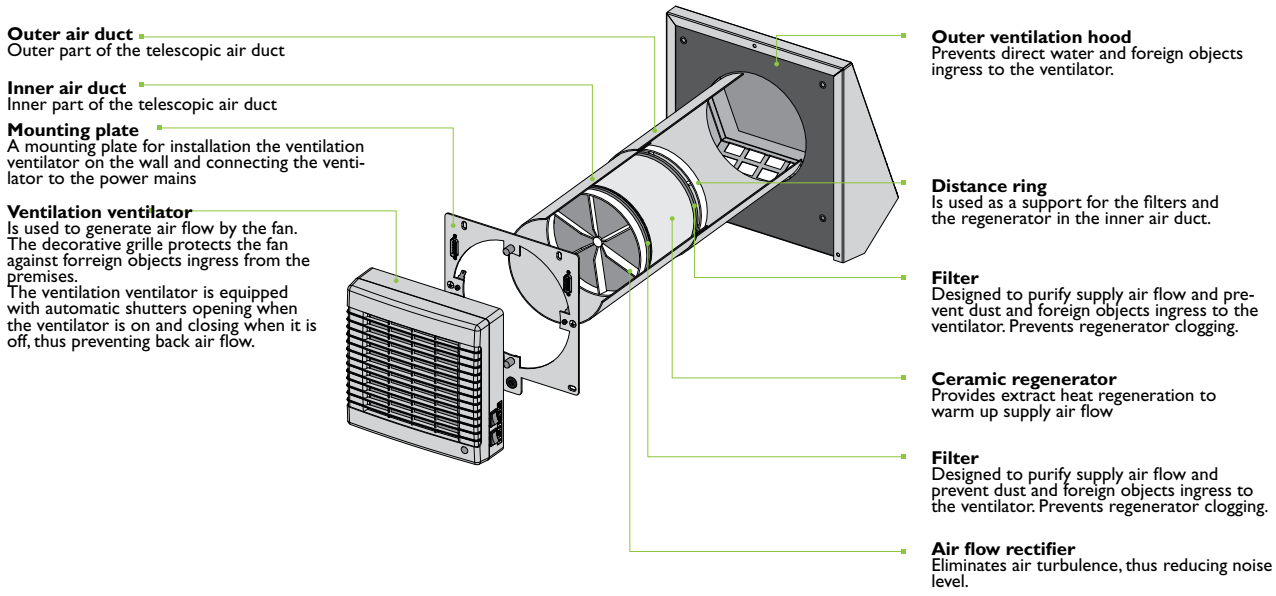
VENTILATOR TECHNICAL DATA

Speed	1	2	3
Supply Voltage , 50-60 Hz (V)	1 ~ 100-230		
Ventilator Total Power (W)	3,8	3,96	5,61
Max. Ventilator Current (A)	0,024	0,026	0,039
Max. Air capacity (m³/h)	14	28	54
RPM (min)	610	800	1450
Noise Level, 3m (dBA)	19	22	29
Max. Transported Air Temperature (°C)	from -20° up to +50°		
Heat Regeneration Efficiency	up to 91%		
Regenerator type	Ceramic		

7. DESIGN AND OPERATING LOGIC

The ventilator consists of the telescopic air duct with adjustable length regulated by position of the inner air duct inside the outer air duct, the ventilation ventilator and the ventilation hood.
Two filters and the ceramic regenerator are located inside the inner duct of the telescope.
The filters are designed to purify supply air and prevent foreign objects ingress to the regenerator and the fan.
The ventilator generates a sound alarm reminding to clean or replace the filter every 90 days.
The ceramic regenerator uses extract air heat energy to warm up supply air flow.
The regenerator is equipped with a pull cord inside to facilitate its withdrawal from the ventilator.The regenerator is installed on an insulation material used as a sealant as well.
The ventilation ventilator must be installed on inner side of the wall.The ventilation ventilator is equipped with automatic schutters that shut the air duct off during the ventilator standby and prevent airb back draft.he ventilation hood must be installed on outer side of the wall to prevent ingress of water and other objects to the ventilator.

VENTILATOR DESIGN


Outer air duct
Outer part of the telescopic air duct
Inner air duct
Inner part of the telescopic air duct
Mounting plate
A mounting plate for installation the ventilation ventilator on the wall and connecting the ventilator to the power mains
Ventilation ventilator
Is used to generate air flow by the fan. The decorative grille protects the fan against forreign objects ingress from the premises.
The ventilation ventilator is equipped with automatic shutters opening when the ventilator is on and closing when it is off, thus preventing back air flow.
Outer ventilation hood
Prevents direct water and foreign objects ingress to the ventilator.
Distance ring
Is used as a support for the filters and the regenerator in the inner air duct.
Filter
Designed to purify supply air flow and prevent dust and foreign objects ingress to the ventilator. Prevents regenerator clogging.
Ceramic regenerator
Provides extract heat regeneration to warm up supply air flow
Filter
Designed to purify supply air flow and prevent dust and foreign objects ingress to the ventilator. Prevents regenerator clogging.
Air flow rectifier
Eliminates air turbulence, thus reducing noise level.

SHUTTERS OPERATION LOGIC

Ventilator is off - shutters are closed

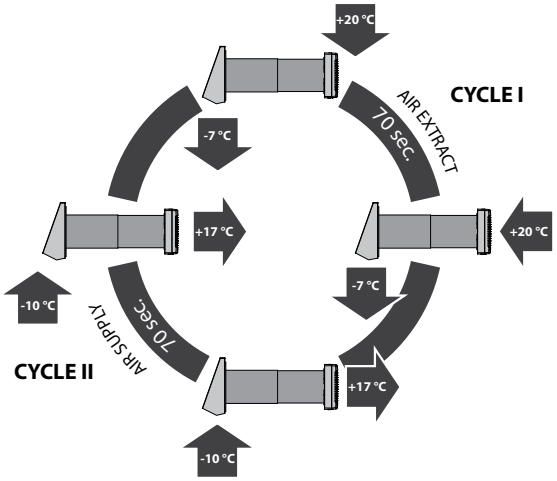
Ventilator is on - shutters are open

VENTILATOR OPERATING MODES

The ventilator has three ventilation modes:

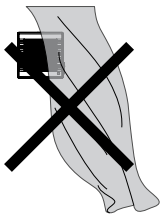
- **Natural air supply -** the ventilator is used for natural ventilation, the fan is not activated.
- **Supply -** the ventilator supplies fresh air to the premise no matter of CN7 jumper position.
- **Ventilation -** the ventilator operates in permanent supply or extract mode at set speed depending on CN7 jumper position.
- **Regeneration -** the ventilator operates in reversible mode with heat and humidity regeneration.

In **Regeneration mode** the ventilator operates in two cycles, 70 seconds each.
Cycle I. Warm stale air is extracted from the room. As it flows through the regenerator, it heats and moisturizes the regenerator, transferring up to 91% heat energy. In 70 seconds as the ceramic regenerator gets warmed the ventilator is switched to supply mode.
Cycle II. Fresh intake air from outside flows through the ceramic regenerator and absorbs accumulated moisture and heat up to the room temperature. In 70 seconds as the ceramic regenerator gets cooled down, the ventilator is switched into extract mode and the cycle is renewed.



8. MOUNTING AND SET-UP

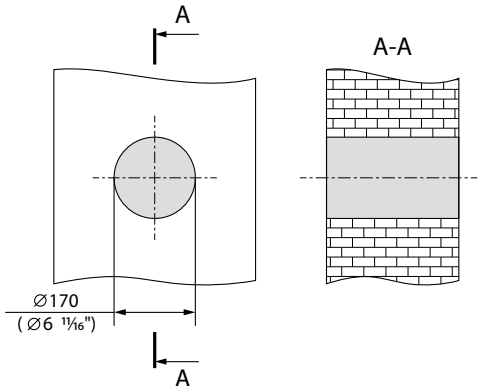
READ THE USER'S MANUAL PRIOR TO MOUNTING THE VENTILATOR.



CAUTION!
THE VENTILATOR MUST NOT BE INSTALLED IN SITES WHERE THE AIR DUCT MAY BE CLOGGED BY THE BLINDS, CURTAINS, DRAPES, ETC., TO PREVENT THE ROOM DUST DEPOSITION AND ACCUMULATION. ALSO, CURTAINS MIGHT OBSTRUCT NORMAL AIRFLOW IN THE ROOM, THUS RENDERING VENTILATOR OPERATION NOT EFFICIENT.

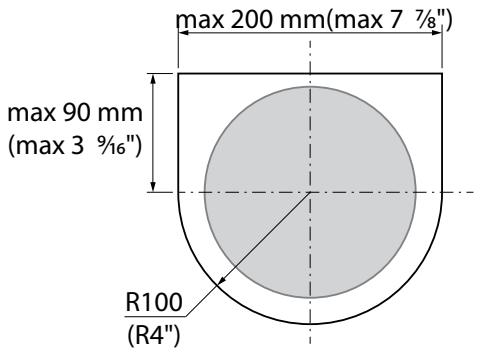
VENTILATOR MOUNTING

1. To mount the ventilator prepare a thorough round hole in the wall. The hole size is shown in the figure below.



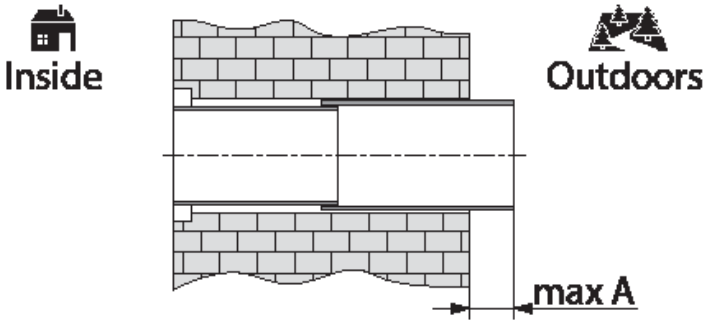
VENTILATOR MOUNTING

2. After preparing a through hole cut out a 25 mm deep recess for laying of the cables and the contact sockets connected to the mounting plate. The recommended recess profile is shown in the drawing on the right.



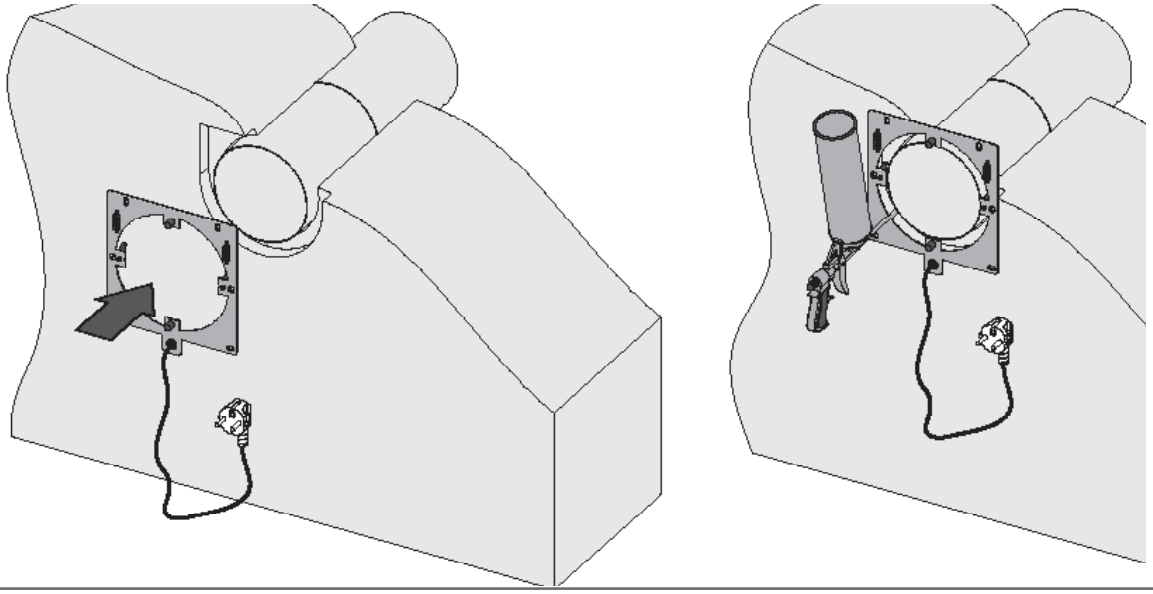
While mounting several connected in series ventilators provide a recess for the cable layout during the hole preparation to enable series connection of several ventilators.

3. Install a telescopic air duct inside the wall. The telescopic air duct end must protrude to the distance A stated below:



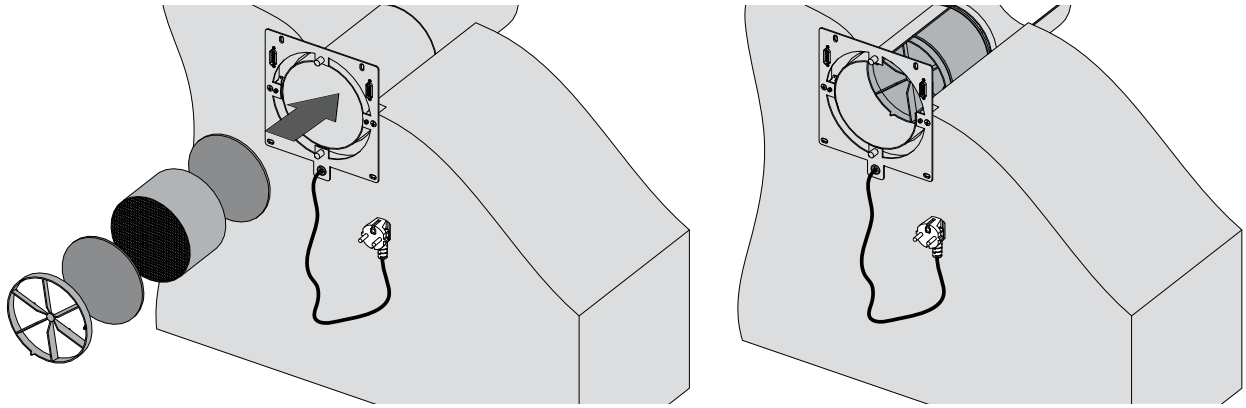
Ventilator model	A, mm
ETP Comfort mini 50S	10
ETP Comfort mini 50L	10 -110

4. Connect the mounting plate following the wiring diagram, page 12.
Prepare four fastening holes and fix the mounting plate on the wall with fours 4x40 screws and 6x40 dowels (included into the delivery set).
Align the telescopic air duct with respect to the mounting plate and fill the gaps between the wall and the telescopic air duct with a mounting foam. The telescopic air duct must not protrude from the mounting plate surface.

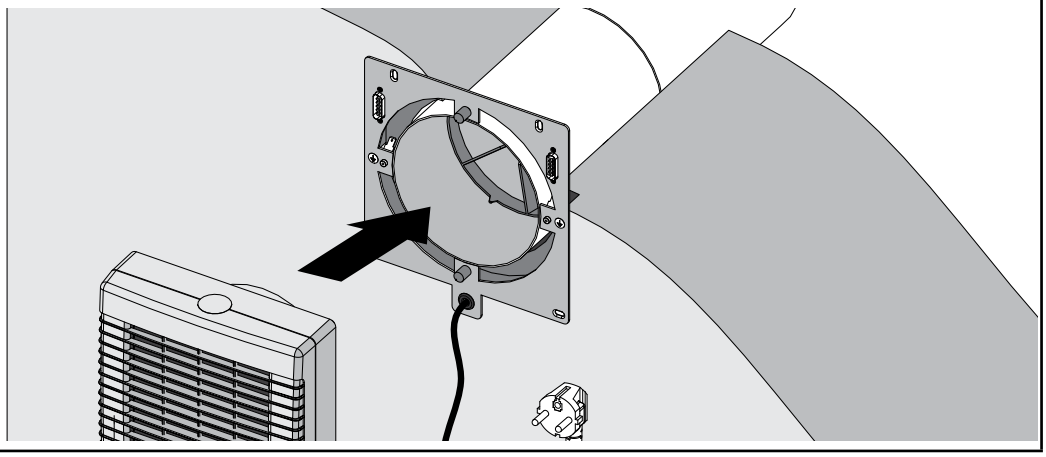


VENTILATOR MOUNTING

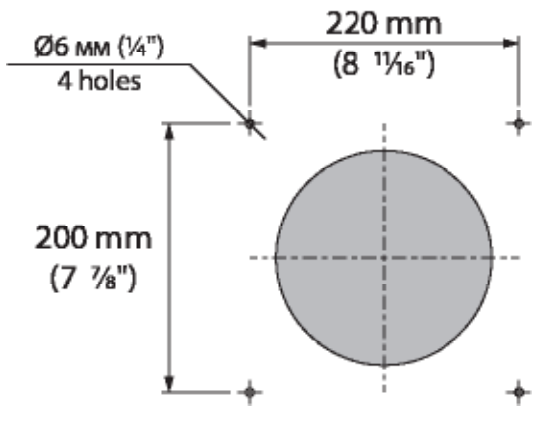
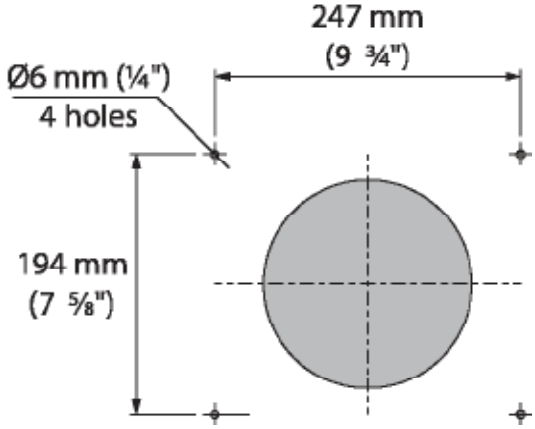
5. Install the filter, the ceramic regenerator, another filter and the air flow rectifier in the consecutive order inside the telescopic air duct.



6. Install the ventilation ventilator on the mounting plate. The ventilation ventilator is fixed with magnets.

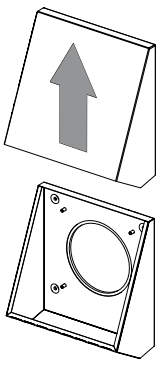


VENTILATION HOOD MOUNTING

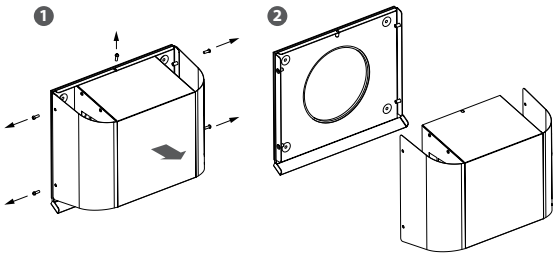
ETP Comfort mini 50S	ETP Comfort mini 50L
1. Mark the fastening holes for the outer ventilation hood and drill holes for the dowel 6x40. For marking convenience use the ventilation hood back part.	
	

2. Insert the dowels 6x40 (included into the delivery set) into the holes.

3. Disassemble the outer ventilation hood to enable access to the fastening holes.

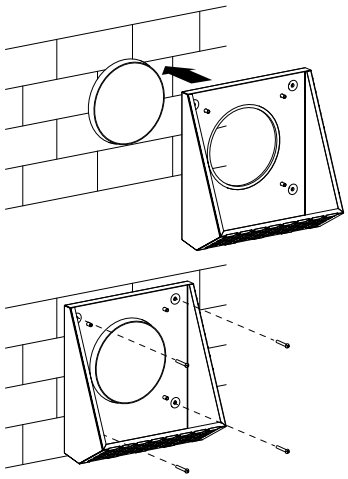


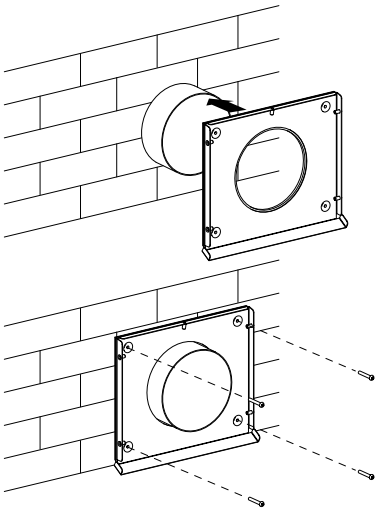
Take off the upper part of the ventilation hood.



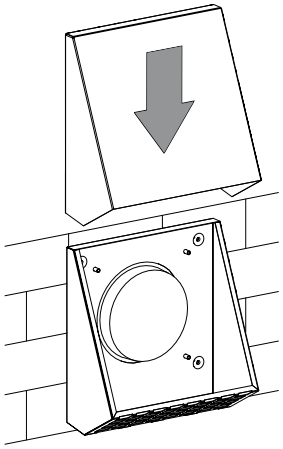
Remove 5 screws and take off the upper part of the outer hood.

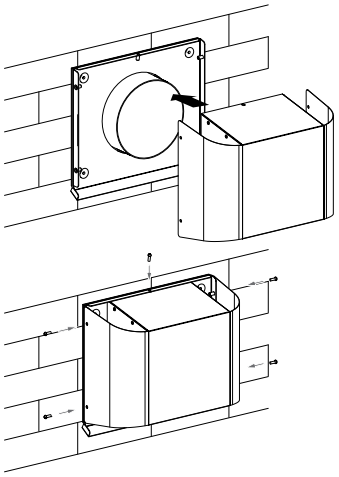
4. Fix the back part of the ventilation hood on the wall with 4x40 screws from the delivery set..





5. Mount the upper part of the ventilation hood





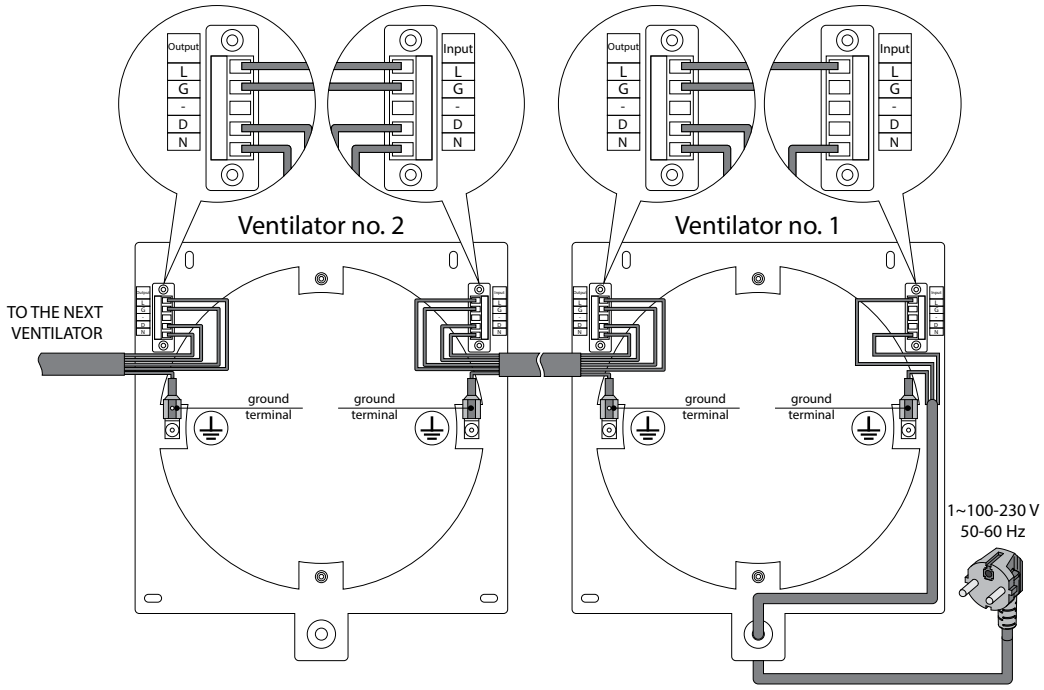
9. CONNECTION TO POWER MAINS

DISCONNECT THE VENTILATOR FROM POWER MAINS PRIOR TO ANY ELECTRIC INSTALLATION OPERATIONS. CONNECT THE VENTILATOR TO A CORRECT INSTALLED SOCKET WITH A GROUNDED TERMINAL.
ANY INTERNAL CONNECTION MODIFICATIONS ARE NOT ALLOWED AND RESULT IN WARRANTY LOSS.

The ventilator is rated for connection to single-phase ac 1~100-230V/ 50-60 Hz power mains. For wireworks facilitation, the ventilation is supplied with a pre-wired power cord and a plug.
Connect the ventilator to power mains through the automatic circuit breaker with magnetic trip integrated into the fixed wiring system.

CONNECTION OF SEVERAL Ventilators IN SERIES

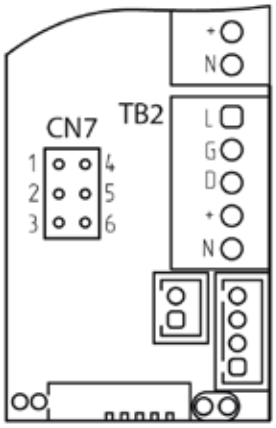
When the ventilators are connected in series, all the connected ventilators are controlled with the first ventilator and a common remote control. To connect the ventilators in series connect the output contact socket of the first ventilator mounting plate with the Input contact socket of the second ventilator mounting plate.
Connect the second ventilator with the third ventilator in the same way, etc. Up to 10 ventilators may be connected in series.
For easy electric installations use a five-wire cable (not included into the delivery set) with the cable cross section not below 0.5mm². The cable must be rated for operation in an alternating current power supply with the country-specific mains voltage.
Disconnect the power cord while connecting the second, third, etc. ventilator in series.



The first ventilator controls all the connected ventilators.
The jumper between the contacts 1 and 2 or 2 and 3 of CN7 socket connector determines a flow direction in **Ventilation mode**.

- If the jumper connects the contacts 1 and 2, air is extracted from the room in **Ventilation mode** (factory setting).
- If the jumper connects the contacts 2 and 3, air is supplied in **Ventilation mode.**

The jumper position at each connected in series ventilator determines a rotation direction in **Ventilation mode** and an operating phase in Regeneration mode. I.e. if the jumper at the first ventilator connects the contacts 2 and 3 and the jumper at the second ventilator connects the contacts 1 and 2, the ventilators operate in opposite directions in **Regeneration mode**.

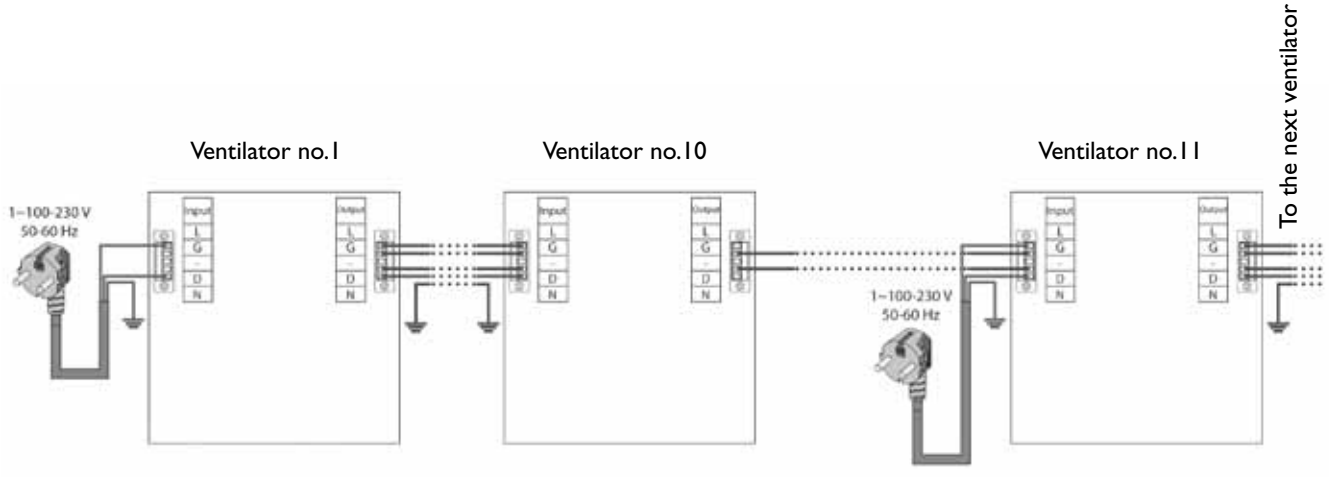


First ventilator controller

CONNECTION OF MORE THAN 10 Ventilators IN SERIES

In case of connection above 10 ventilators power is supplied to the 11th ventilator (L and N terminals) not from the previous ventilator but from power mains. The control signals G an D from the 10th ventilator are transferred through the cable 2 x 0,5 mm².
The ventilators 12....20 are connected to the ventilator n°11 in the same way as the ventilators n° 1.....10.
All the connected ventilators are controlled with the ventilator n° 1.

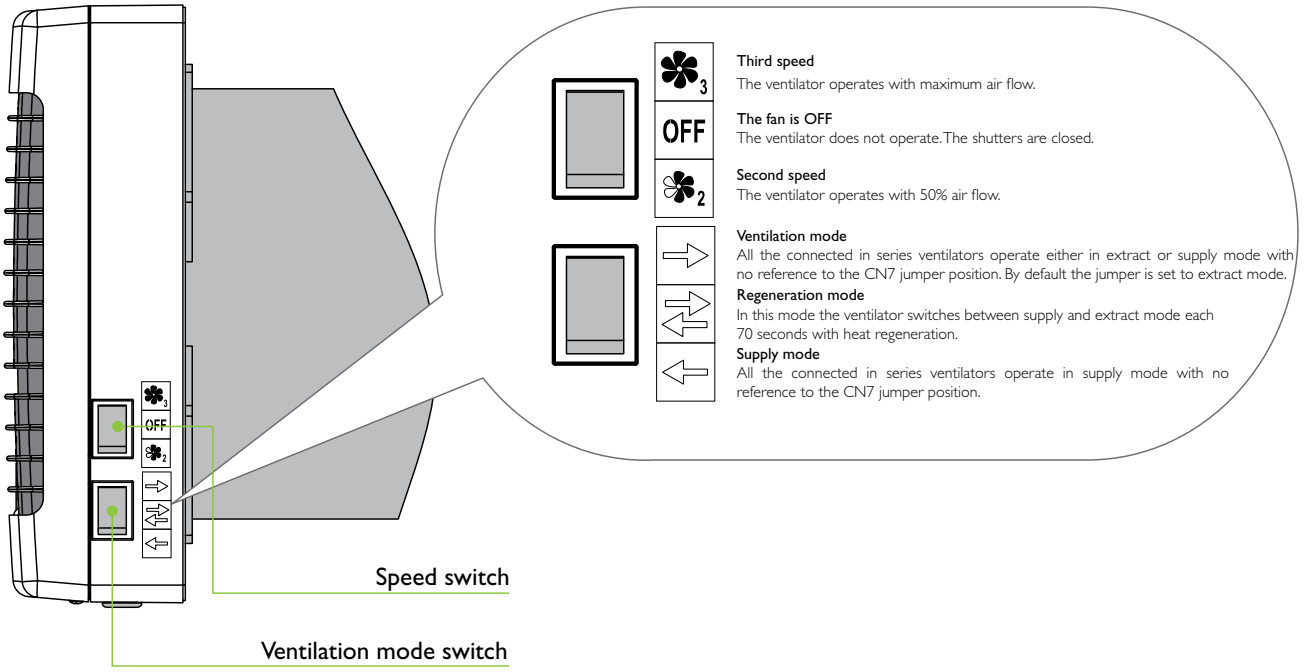
ALL THE CONNECTED IN SERIES VENTILATORS MUST BE GROUNDED!



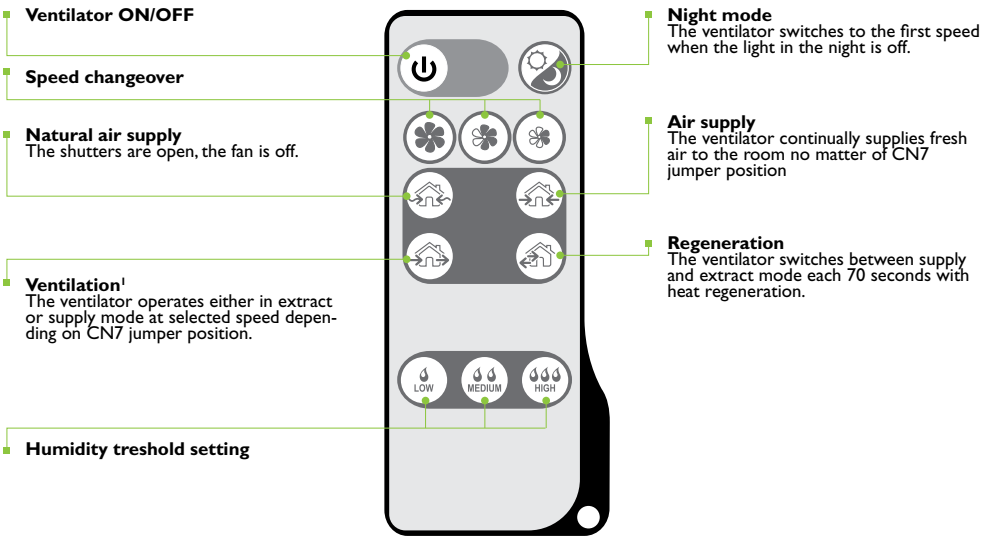
10. VENTILATOR CONTROL

The ventilator is operated with a remote controller or the buttons on the ventilator casing.
The operation buttons on the ventilator casing have limited functionality and include activating the second and third speed and setting three of four ventilation modes. The remote controller has wider control capabilities.

CONTROL BUTTONS ON THE VENTILATOR CASING


OFF
Speed switch
Ventilation mode switch
Third speed
The ventilator operates with maximum air flow.
The fan is OFF
The ventilator does not operate. The shutters are closed.
Second speed
The ventilator operates with 50% air flow.
Ventilation mode
All the connected in series ventilators operate either in extract or supply mode with no reference to the CN7 jumper position. By default the jumper is set to extract mode.
Regeneration mode
In this mode the ventilator switches between supply and extract mode each 70 seconds with heat regeneration.
Supply mode
All the connected in series ventilators operate in supply mode with no reference to the CN7 jumper position.

REMOTE CONTROL


Ventilator ON/OFF
Speed changeover
Natural air supply
The shutters are open, the fan is off.
Ventilation[1]
The ventilator operates either in extract or supply mode at selected speed depending on CN7 jumper position.
Humidity treshold setting
LOW
MEDIUM
HIGH
Night mode
The ventilator switches to the first speed when the light in the night is off.
Air supply
The ventilator continually supplies fresh air to the room no matter of CN7 jumper position
Regeneration
The ventilator switches between supply and extract mode each 70 seconds with heat regeneration.

1 - operation of all the connected in series ventilators is determined by the CN7 jumper position.

OPERATION WITH THE CONTROL BUTTONS ON THE VENTILATOR CASING

1. Turning the ventilator ON. Setting operation speed.	
	second speed.
	third speed.
2. Turning the ventilator OFF.	
	Turning the ventilator OFF.

REMOTE CONTROL

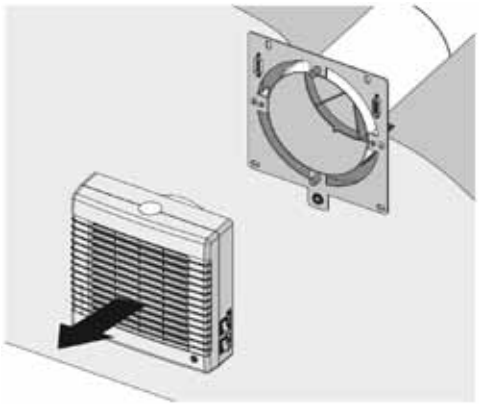
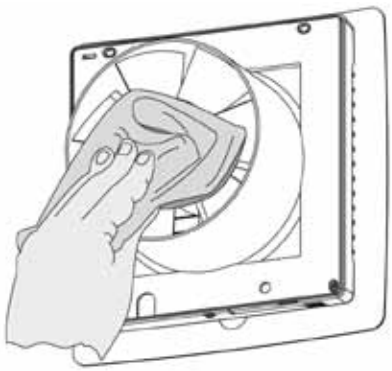
Set the speed switch to position and the ventilation mode switch to position to enable remote control of the ventilator.	
1. Turning ventilator ON/OFF.	
	ON/OFF
2. Night mode	
	ON/OFF
If Night mode is activated, the ventilator switches to the first speed in the night, when the light is turned off. Activation of the night mode is confirmed by a long sound signal. Exiting the night mode is confirmed by a short sound signal.	
3. Speed setting	
	First speed.
	Second speed.
	Third speed.
4. Operation mode	
	Natural air supply mode. The room is ventilated in the natural way, the fan is off.
	Air supply mode. Air is supplied to the room at a set speed no matter of CN7 jumper.
	Ventilation mode. Air is extracted (factory setting) or supplied at a selected speed. All the ventilators connected in series ventilators operate depending on position of CN7 jumper.
	Regeneration mode. The ventilator operates 70 seconds in Supply mode and then 70 seconds in Extract mode with heat regeneration.
5. Humidity control. Humidity control is possible only in Regeneration mode.	
	Setting humidity threshold - 45%
	Setting humidity threshold - 55%
	Setting humidity threshold - 65%
HUMIDITY CONTROL MAY BE ACTIVATED WITH THE REMOTE CONTROL ONLY!	

11. MAINTENANCE

DISCONNECT THE VENTILATOR FROM POWER SUPPLY BEFORE ANY MAINTENANCE OPERATION OF THE VENTILATOR

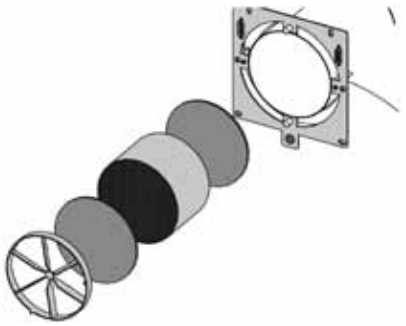
Maintenance of the ventilator means regular cleaning of the ventilator surfaces from dust and cleaning or replacement of the ventilator filters.

Ventilator MAINTENANCE

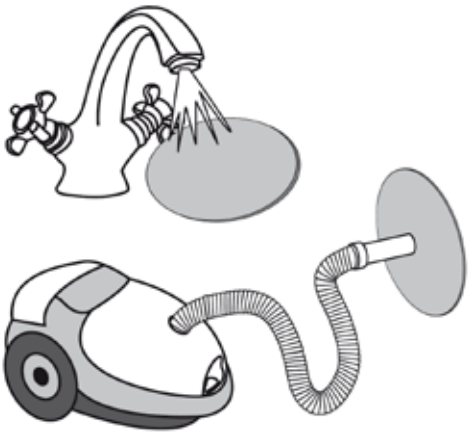
1. Fan maintenance (once per year)	
Pull the ventilation ventilator to remove.	
Clean the impeller blades; To remove dust use a soft brush, cloth or vacuum cleaner. Do not use water, abrasive detergents, solvents, sharp objects. The impeller blades must be cleaned once a year.	

2. Regenerator and filter maintenance (4 times a year)

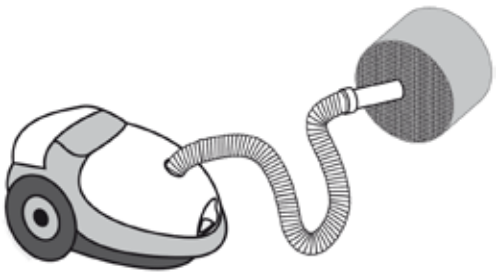
Remove the air flow rectifier.
Remove the filter in front of the regenerator.
Pull the regenerator cord to remove it from the air duct.
Be careful while pulling the regenerator to avoid its damage.
Remove the filter after the regenerator.



Clean the filter as often as it gets soiled, but a least 3-4 times a year.
Once a 90day period of operation expires, the ventilator generates a sound signal as a reminder of the need to replace or clean the filter. The signal is repeated every 5 minutes until the maintenance has been completed.
Clean the filters, let those get dry and install the dry filters inside the air duct.
Vacuum cleaning is allowed.
The filter rated service life is 3 years.
Contact the seller for spare filters.



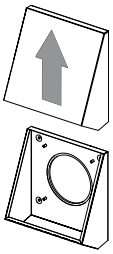
Even regular technical maintenance may not completely prevent dirt accumulation on the regeneration assemblies.
Subject the regenerator to regular cleaning to ensure high heat echange efficiency.
Clean the heat exchanger with a vacuum cleaner at least once in a year.

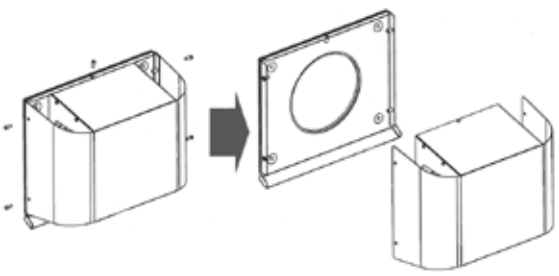


To reset the operating time meter indication, install the filters and the regenerator into the ventilator and then press andhold the button for 10sec. until a long sound signal.

3. Outer hood maintenance (once a year)

The ventilation hood grill may get clogged with leaves and other objects which impairs the unit performance.
Check the ventilation hood twice per year and clean it as often as required.
To clean the ventilation hood disassemble it, then clean the ventilation hood ans the air duct.





11. FAULT HANDLING

POSSIBLE FAULTS AND TROUBLESHOOTING

Fault	Possible reasons	Fault handling
The fan does not start up during the ventilator start-up	No power supply	- Make sure that the ventilator is properly connected to the power mains and make any corrections, if necessary.
	Motor is jammed, the impeller are clogged	- Turn the ventilator off. Troubleshoot the motor jam. and the impeller clogging. - Clean the blades - Restart the ventilator
Automatic switch tripping following the ventilator turning on.	Overcurrent resulted from short circuit in the electric circuit	- Turn the ventilator off - Contact the service centre
Low air flow	Low set fan speed	- Set higher speed
	The filters, the fan or the regenerator are dirty.	- Clean or replace the filter, clean the fan and the regenerator. - For the regenerator and the filter maintenance, refer to pg. 18
The ventilator generates sound signals.	The operating time meter for filter replacement is activated.	For the regenerator and the filter maintenance, refer to pg. 18
High noise, vibration	The impeller is soiled	- Clean the impeller
	Loose screw connection of the ventilator or the ventilation hood.	- Tighten the screws of the ventilator or the outer ventilation hood.

ETP nv | Blauwfazantjesstraat 4 | B - 7700 Moeskroen
Tel. +32 (0)56 48 15 90 | Fax +32 (0)56 48 15 91 |
info@elek-trends.be I info@veneco-ventilation.be
www.elek-trends.be I www.veneco-ventilation.be